**SERGIO ESTEBAN FORERO PINZÓN**

**TALLER 6 PSP 2.1**

**PSP1 Project Plan Summary**

|  |  |  |  |
| --- | --- | --- | --- |
| Student | Sergio Esteban Forero Pinzón | Date | 4/03/2015 |
| Program | PSP2.1 Regla de Simpson | Program # | 6 |
| Instructor | Daniel Benavides | Language | Java |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Summary*** | ***Plan*** | | |  | ***Actual*** | | |  | ***To Date*** | | |
| ***Size/Hour*** | 160 | | |  | 195 | | |  | 315 | | |
|  |  | | |  |  | | |  |  | | |
| **Program Size** | ***Plan*** | | |  | **Actual** | | |  | **To Date** | | |
| Base (B) | 80 | | |  | 62 | | |  |  | | |
|  | ***(Measured)*** | | |  | (Measured) | | |  |  | | |
| Deleted (D) | ***0*** | | |  | 0 | | |  |  | | |
|  | ***(Estimated)*** | | |  | (Counted) | | |  |  | | |
| Modified (M) | ***20*** | | |  | 13 | | |  |  | | |
|  | ***(Estimated)*** | | |  | (Counted) | | |  |  | | |
| Added (A) | ***60*** | | |  | 82 | | |  |  | | |
|  | ***(A+M − M)*** | | |  | (T − B + D − R) | | |  |  | | |
| Reused (R) | ***0*** | | |  | 0 | | |  | 0 | | |
|  | ***(Estimated)*** | | |  | (Counted) | | |  |  | | |
| Added and Modified (A+M) | ***80*** | | |  | 95 | | |  | 305 | | |
|  | ***(Projected)*** | | |  | (A + M) | | |  |  | | |
| Total Size (T) | ***95*** | | |  | 130 | | |  | 305 | | |
|  | ***(A+M + B − M − D + R)*** | | |  | (Measured) | | |  |  | | |
| Total New Reusable | 40 | | |  | 53 | | |  | 193 | | |
|  |  | | |  |  | | |  |  | | |
| ***Estimated Proxy Size (E)*** | 175 | | |  |  | | |  |  | | |
|  |  | | |  |  | | |  |  | | |
| **Time in Phase (min.)** | **Plan** |  | **Actual** | | |  | **To Date** | | |  | **To Date %** |
| Planning |  |  | 30 | | |  | 181 | | |  | 7.1% |
| Design |  |  | 30 | | |  | 158 | | |  | 6.2% |
| Code |  |  | 215 | | |  | 1316 | | |  | 51,7% |
| Compile |  |  | 10 | | |  | 98 | | |  | 3,8% |
| Test |  |  | 45 | | |  | 185 | | |  | 7.3% |
| Postmortem |  |  | 120 | | |  | 607 | | |  | 23.8% |
| Total |  |  | 450 | | |  | 2545 | | |  | 100% |
|  |  |  |  | | |  |  | | |  |  |
| **Defects Injected** |  |  | **Actual** | | |  | **To Date** | | |  | **To Date %** |
| Planning |  |  | 0 | | |  | 0 | | |  | 0% |
| Design |  |  | 0 | | |  | 2 | | |  | 8.7% |
| Code |  |  | 3 | | |  | 9 | | |  | 39.1% |
| Compile |  |  | 0 | | |  | 3 | | |  | 13% |
| Test |  |  | 1 | | |  | 9 | | |  | 39.1% |
| Total Development |  |  | 4 | | |  | 23 | | |  | 100% |
|  |  |  |  | | |  |  | | |  |  |
| **Defects Removed** |  |  | **Actual** | | |  | **To Date** | | |  | **To Date %** |
| Planning |  |  | 0 | | |  | 0 | | |  | 0% |
| Design |  |  | 0 | | |  | 2 | | |  | 8.7% |
| Code |  |  | 3 | | |  | 9 | | |  | 39.1% |
| Compile |  |  | 0 | | |  | 3 | | |  | 13% |
| Test |  |  | 1 | | |  | 9 | | |  | 39.1% |
| Total Development |  |  | 4 | | |  | 23 | | |  | 100% |
| After Development |  |  |  | | |  |  | | |  |  |

Time Recording Log

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Project** | **Phase** | **Start Date and Time** | **Int. Time** | **Stop Date and Time** | **Delta**  **Time** | **Comments** |
| PSP1 | Planning | 10:00 am 1/03/2015 | 30 | 10:30 | 0 |  |
| PSP1 | Design | 10:30 | 30 | 11:00 | 0 |  |
| PSP1 | Code | 11:00 | 115 | 1:10 | 15 |  |
| PSP1 | Compile | 2:40 | 10 | 2:50 | 0 |  |
| PSP1 | Code | 11:00pm  2/03/2015 | 100 | 1:00am | 20 |  |
| PSP1 | test | 11:00pm  3/03/2015 | 45 | 11:45 | 0 |  |
| PSP1 | Posmorten | 11:45 | 120 | 1:45 | 0 |  |

Size Estimating Template

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Estimated | | | | | | | | | | | |
| Base Parts |  | Base | |  | Deleted | |  | Modified | | |  | Added | |
|  |  |  | |  |  | |  |  | | |  |  | |
| Regla Simpson |  | 62 | |  | 0 | |  | 13 | | |  | 0 | |
|  |  |  | |  |  | |  |  | | |  |  | |
|  |  |  | |  |  | |  |  | | |  |  | |
| Total | B | | 62 | D | | 0 | M | | 13 | **BA** | | | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Actual | | | | | | | | | | |
| Base Parts |  | Base | |  | Deleted | |  | Modified | |  | Added | |
|  |  |  | |  |  | |  |  | |  |  | |
|  |  |  | |  |  | |  |  | |  |  | |
|  |  |  | |  |  | |  |  | |  |  | |
| Regla Simpson |  | 62 | |  | 0 | |  | 13 | |  | 0 | |
| Total |  | | 62 |  | | 0 |  | | 13 |  | | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Estimated | | | | | | | |  | Actual | | |
| Parts Additions |  | Type |  | Items |  | Rel. Size | |  | Size\* |  | Size\* |  | Items |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
| View |  |  |  | 3 |  | 30 | |  | 70 |  | 80 |  | 3 |
| Controller |  |  |  | 4 |  | 20 | |  | 80 |  | 105 |  | 4 |
| Model |  |  |  | 2 |  | 30 | |  | 60 |  | 68 |  | 3 |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Total |  |  |  |  |  |  | PA | | 210 |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | |  | Estimated |  | Actual |
| Reused Parts | |  | Size |  | Size |
|  | |  |  |  |  |
|  | |  |  |  |  |
|  | |  |  |  |  |
|  | |  |  |  |  |
|  | |  |  |  |  |
|  | |  |  |  |  |
|  | |  |  |  |  |
| Total | R | | 0 |  | 0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PROBE Calculation Worksheet (Added and Modified) |  | Size |  | Time |
| Added size (A): A = BA+PA |  | 210 |  |  |
| Estimated Proxy Size (E): E = BA+PA+M |  | 223 |  |  |
| PROBE estimating basis used: (A, B, C, or D) |  | 4C |  | 4C |
| Correlation: (R2) |  | 1 |  | 1 |
| Regression Parameters: β0 Size and Time |  | 0 |  | 0 |
| Regression Parameters: β1 Size and Time |  | 1,13 |  | 1,2 |
| Projected Added and Modified Size (P): P = β0size + β1size\*E |  | 168,5 |  |  |
| Estimated Total Size (T): T = P + B - D - M + R |  | 179,5 |  |  |
| Estimated Total New Reusable (NR): sum of \* items |  | 0 |  |  |
| Estimated Total Development Time: Time = β0time + β1time\*E |  |  |  | 267,6 |
| Prediction Range: Range |  |  |  |  |
| Upper Prediction Interval: UPI = P + Range |  |  |  |  |
| Lower Prediction Interval: LPI = P - Range |  |  |  |  |
| Prediction Interval Percent: |  |  |  |  |

**Design Review CheckList**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Completitud | * Verificar que el diseño cubra todos los requerimientos * Verificar que esten todas las enradas y salidas * Verificar la visibilidad de las clases | Si  Si  Si |  |  |  |
| Dependencias | * Verificar dependencias * Verificar accesibilidad a servicios externos | Si  No |  |  |  |
| Orientado a objetos | * Clases con responsabilidades unicas * Bajo acoplamiento * Alta cohesion | Si  No  No |  |  |  |
| Especificación | * Cada metodo documentado * Comentarios de licencias | Si  No |  |  |  |
| Pruebas Unitarias | * Cada clase tiene una clase de pruebas | No |  |  |  |

**Code Review CheckList**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Completitud | * Verificar que el codigo cubra todo el diseño | Si |  |  |  |
| Inicializacion | * Verificar la inicializacion de variables * Verificar que toda clase tenga un constructor * Verificar el inicio y fin de todo ciclo | Si  No  Si |  |  |  |
| Llamados | * Verificar las entradas y salidas de los metodos | Si |  |  |  |
| Manejo de Excepciones | * Todas las excepciones son capturadas * Todos los metodos con Throws * No hay excepciones genericas | Si  No  No |  |  |  |
| Identación | * Respetar estandar de codificación | Si |  |  |  |
| Sentencias logicas | * Verificar operadores logicos | Si |  |  |  |

**Resultados Esperados:**

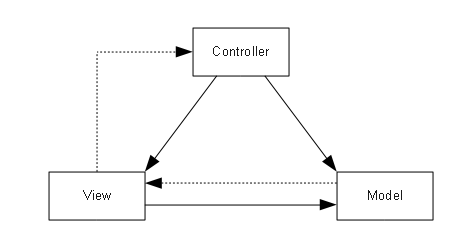
|  |  |  |  |
| --- | --- | --- | --- |
| **Test** | | **Expected Value** | **Actual Value** |
| ***p*** | ***dof*** | ***x*** |  |
| 0.20 | 6 | 0.55338 | 0.55337834 |
| 0.45 | 15 | 1.75305 | 1.75304802 |
| 0.495 | 4 | 4.60409 | 4.604081 |

Operational Specification Template

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario Number** |  | **User Objective** |  | |
| **Scenario Objective** | |  | | |
| **Source** | **Step** | **Action** | | **Comments** |
|  | 1 | Primero se debe diligenciar el formulario e ingresar los valores correspondientes para X, P y dof | |  |
|  | 2 | Se da clic en el botón Submit, lo cual iniciara el sistema para calcular X | |  |
|  | 3 | El sistema calcula X según los valores ingresados.  Itera n veces para obtener el valor más aproximado de X y cada iteración calcula P con la regla de Simpson. | |  |
|  | 4 | El sistema presenta al usuario los resultados calculados de P y de X | |  |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |
|  |  |  | |  |

|  |  |
| --- | --- |
| **Design** | Para realizar este desarrollo se usó una estructura basada en el modelo tipo MVC |
| **References** |  |
|  |  |
|  |  |
|  |  |

**Graphical representation of the metaphor**



**Textual representation of metaphor**

Esta estructura se divide en tres capas:

* Modelo: En el sistema se contempla la realización de las formulas y regresiones para los cálculos.
* Controlador: Obtiene los datos de la pantalla y los envía y recibe las respuestas del modelo
* Vista: En la vista se diseña el formulario a diligenciar con el que el usuario deberá interactuar.